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## MBooks Usability Reports

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# MBooks Usability

## Comparative Evaluation

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Overview: This report contains the comparative evaluation of MBooks' competitive landscape. Also known as the Michigan Digitization Project, this venture, associated with Google, provides an online access system to the University of Michigan Library's digitized collections. MBooks utilizes a "page turner" interface that allows users to search within a text or view the full text depending on the copyright restrictions in place for each individual resource. The MBooks system does not currently allow downloading of full texts, nor can its collection be browsed or searched as a distinct entity among the electronic resources at U of M.

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## Introduction

MBooks is by no means the first online book reading system to have appeared in either libraries or the commercial book industry. Since the later years of the 1990s, “college and university librarians expressed considerable optimism about the potential for online books in their collections,” with their greatest perceived utility coming from reference works and “online books that are in high demand, of transient topicality, or not part of their print collections.”<sup>1</sup> However, the delivery methods for online books at that time were, and still are in some cases, less than adequate for researchers, students, or even the general public.

It has been noted that contemporary vendors attribute the early failures of electronic books, in large part, to the fact that their predecessors “did not add any value to the electronic versions of books. Without any additional value, there was little motivation for consumers to buy the ebooks when the paper book worked perfectly fine.”<sup>2</sup> As the concept of electronic books enters its second iteration, the issues that plagued early online reading systems are being addressed toward the goal of adding that extra worth for users. Digital publication of reference materials is currently experiencing a revival as a result. Those analyzing this trend attribute this to the technology’s ability to consolidate processes that take longer in the physical realm. Repetitive and inefficient tasks in the research process can be eliminated online by adding “levels of interactivity and usefulness... such as live graphs, live equations, and interactive tables,” by allowing users to cut and paste information into their work, or by allowing for searching and retrieval of cited resources from within the electronic book interface. Additionally, online delivery of books makes it far easier for publishers to make corrections or revisions to a text and disseminate the new version. Truly, if electronic books will ever rise to position of being truly competitive with paper, it will be by means of “providing ways to use... data online that would not be possible in the paper world”<sup>3</sup>

This same standpoint could be easily adapted beyond reference materials to most types of online literature. As libraries and research institutions increasingly feel pressure from budget and space constraints, administrators in these communities will turn to online delivery of materials as a solution to the problems that emerge. There are a number of groups at present that are working to create usable online readers that serve the diverse purposes of their users by improving upon the book. This is an evaluation of MBooks’ competitors in the realm of libraries, publishes, and book sellers to offer a glimpse into the elements of functionality, usability, and aesthetics they offer to users. Our overviews of Google Book Search, Amazon Online Reader, ProQuest’s Safari Books Online, The Internet Archive’s Open Library, and the Harvard University Library’s online books will provide a glimpse of how different organizations are seeking to implement the advantages of online resources without losing the comfort, portability, and usefulness of books. While it will take decades or longer for electronic books to displace the popularity of print, useful systems for the inevitable period of transition can be developed by choosing to develop the best elements from the current landscape. Through this, information professionals can better use this technology as a solution for the variety of problems confronting libraries, publishers, and researchers today.

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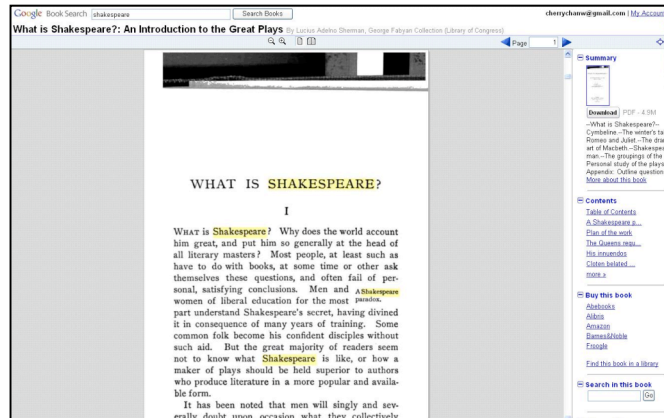
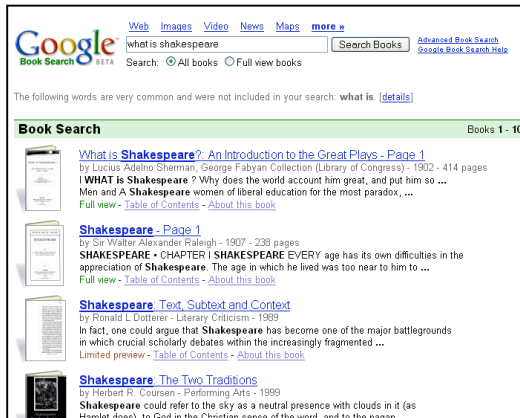
<sup>1</sup> Summerfield, Mary, et al. “Perspectives on scholarly online books: the Columbia University online books evaluation project.” *Journal of Library Administration* v. 35 no1/2 (2001), pg. 78

<sup>2</sup> Miller, Ron. “Ebooks Worm Their Way into the Reference Market.” *EContent (EContent)* v. 28 no7/8 (July/August 2005) p. 30-4

<sup>3</sup> Miller, Pg. 32

## Google Book Search

(http://books.google.com)



Google Book search describes itself as a service that “allows you to search the full text of books to find ones that interest you and learn where to buy or borrow them.”<sup>4</sup> The Book Search works just like a basic web search using the general Google.com search interface. Results are listed based on how closely they match the user provided search term. By clicking on a book result, the site provides the capabilities to see everything from a few short excerpts to the entire book, depending on copyright and other issues. The books provided by Google are acquired either through a partnership with publishers and other marketing firms or through the library digitization partnerships that Google has established with a number of different Universities and institutions. The snippets and books supplied by Google are meant as a means of promotion for publishers and a way for users to discover new books tailored to their interests.

### Aesthetics:

The simplicity of the Google search interface provides a very clean view compared with the often overwhelming and cluttered search interface of Mirlyn. However, the actual book view of the Google books is a bit jarring. The position of the navigation bar on the right hand side of the screen (as opposed to the more common left side) is distracting when trying to read and navigate through the book. The ability to view the book as two pages outlined by an actual book cover makes the experience of reading online more comfortable and similar to that of reading a tangible book, a feeling that MBooks lacks by only providing one page at a time. Finally, the font size, especially when the book is zoomed, is often welcoming and easy to follow.

### Key Benefits

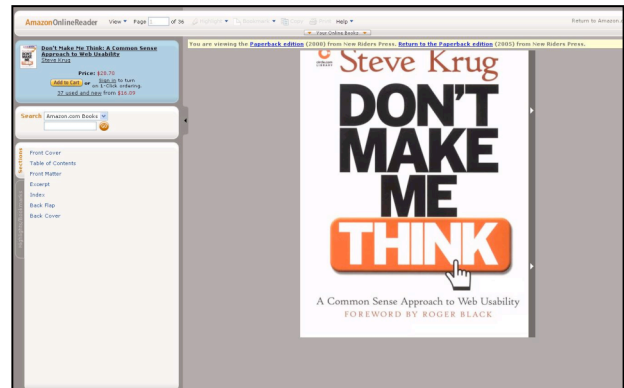
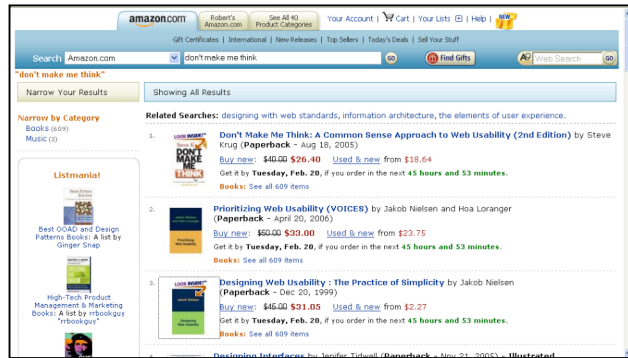
- Nice look and feel, simplicity of Google searching, good functionality, good accessibility

### Disadvantages

- Commercially oriented, not a research tool.

<sup>4</sup> “About Google Book Search.” Accessed 17 February 2007, at <http://books.google.com/intl/en/googlebooks/about.html>

## Amazon Online Reader (<http://www.amazon.com>)



Amazon.com has implemented an online reader interface that allows users to browse excerpts from a substantial number of books available through the website. These books are easily identified with a clear graphic attached to the image of the book cover that says “Search Inside.” The hope is that users will be more encouraged to buy a book if they are given the opportunity to browse portions of the book in a similar fashion to visiting a physical bookstore. Additionally the site has provided entire books online through their Amazon Upgrade program. When a user purchases a book through Amazon they also have the option of purchasing the Amazon Upgrade that supplies the user with a digitized copy of the text. The Online Reader for these full texts and purchased books gives the user the additional functionality of highlighting and annotating their text so that the customer can use the book before it has been received in the mail. The online reader has much in common with other page turning interfaces, showing excerpts from the book a page at a time, along with the ability to search and browse the text.

### Aesthetics:

A drawback to the reader interface is that the text page does not easily fit into the viewing pane due to the presence of the menu bar and the browser bar. Additional scrolling is needed, which prevents the book from being presented as a cohesive whole. Instead, it feels more like reading a webpage than a book. The ability in the full text, purchased version of the book is that highlighting and comments can be added, allowing the user to make their own mark on the book, just as they would in their tangible copies.

### Key Benefits

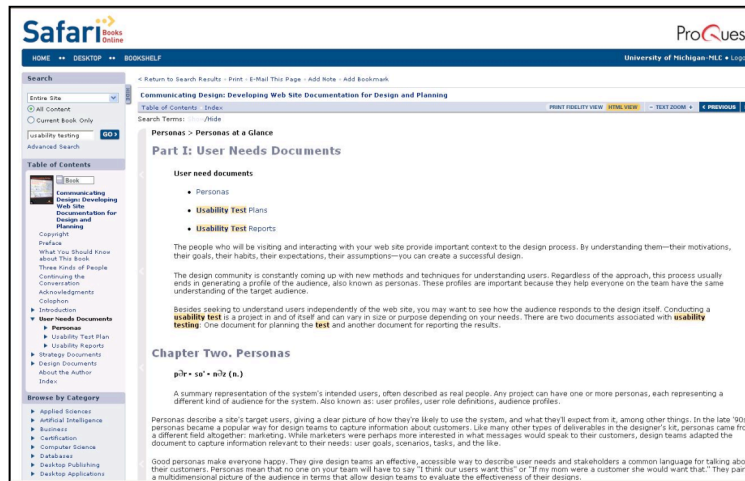
- Annotation, summaries, business model allows for full downloads of purchased books.
- Ability to browse books before purchase gives home users a bookstore feel.
- Good reviews/recommender
- Extensive help

### Disadvantages

- Commercially oriented, not a research tool.
- Scrolling required
- No interactive table of contents
- Single page only

# Safari Books Online

(<http://proquest.safaribooksonline.com>)



The self-proclaimed goal of Safari Online Books is to “Take the best IT books from the best authors and publishers. Put them into an online database that programming and IT professionals can search to quickly pinpoint reliable code examples and technical information.”<sup>5</sup> The site, available to the University of Michigan community through the University Library website, provides over 4000 full text tech books from partners O'Reilly Media and The Pearson Technology Group (two leading tech publishers) among others. Each book is presented in a scrollable interface with the text broken into major sections for viewing at once.

Aesthetics:

Overall the simplicity of the site's color scheme and design make it easy to navigate and understand. The site's layout also corresponds to the culture associated with the tech books it supplies. A page-turner interface will often, and this is true in the case of MBooks, try to imitate the experience of reading a actual book by providing one page at a time. However, Safari Books does not try to represent their interface as a metaphor for a physical book, which corresponds well to the needs and desires of the users of tech books. Overall the fonts are easy to read and not too straining on the users' eyes.

## Key Benefits

- Pleasant, self-apparent layout
- Reimagines the 'book' to better serve its user base
- Interactive table of contents and linkable section divisions

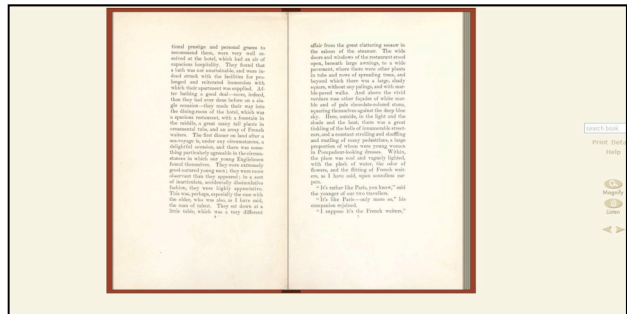
## Disadvantages

- Limited capacity to download, difficult process
- Expense of subscription, mostly accessible to enterprise and education, not personal use oriented
- Accessibility issues (i.e. limited zoom)

<sup>5</sup> “About Safari.” Accessed 17 February 2007, at <http://proquest.safaribooksonline.com.proxy.lib.umich.edu/about>

# The Open Library

(<http://www.openlibrary.org>)



*"Today we are making a step towards building the library we have all dreamed of – the library that makes all the published works of humankind available to everyone in the world."*<sup>6</sup>

The Open Library was created by the Internet Archive to demonstrate a manner of representing books online. It shares the same display interface for online reading that the Internet Archive uses for viewing its texts. The project has enjoyed the support and collaboration of HP Labs, Adobe, The University of Toronto Library, the University of California Library system, Yahoo!, The Carnegie Mellon University, the National Science Foundation, and the governments and libraries of India and China. In their own words, they seek to "combine the best that the library system and publishing industry offer to build toward universal access to all knowledge."<sup>7</sup>

Aesthetics:

One very strong point in the Open Library page-turner interface is the comfortable, book-like feel of the actual image. The pages flip with a realistic motion and the user can turn multiple pages at once in a smooth transaction. MBooks, on the other hand, only allows the user to see one page at a time and does not provide the same page flipping experience. The Open Library interface has a simple and pleasant color scheme, which is different from the stark white background on every MBook. Finally, the simple interface of the Open Library, which has very few buttons and clearly labeled links, is inviting and reassuring to the user.

## Key Benefits

- Pleasant layout, two-page, really feels like a book
- Search results represented as virtual tape flags, very easy to use
- As a part of the Internet Archive, offers users full-text downloads and alternative delivery methods (i.e. full text)

## Disadvantages

- Inconsistency in popup menus, limited help
- Cannot jump to page using number entry
- Limited metadata (just what's needed)
- Only a simple rating system
- Most searching/browsing must be done in Internet Archive; nothing native

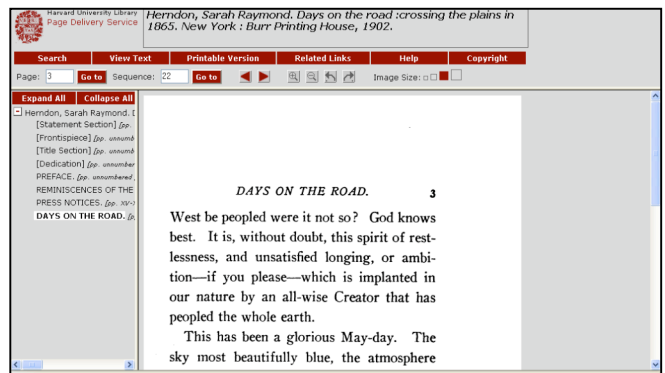
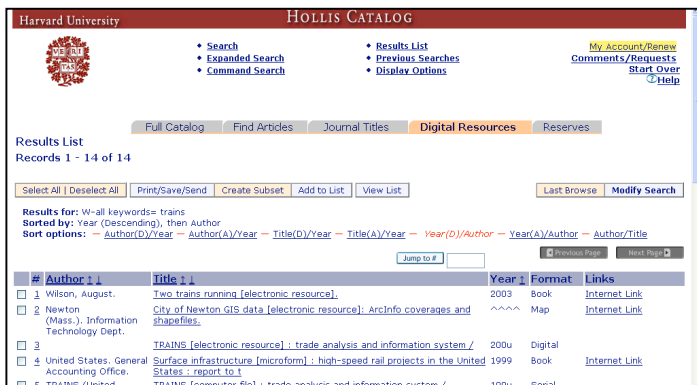
<sup>6</sup> Kahle, Brewster. *The Open Library*. Accessed 15 February 2007, at <http://www.openlibrary.org>. Pg. 4

<sup>7</sup> Kahle, pg. 6.



# Harvard University Library

(<http://holliscatalog.harvard.edu>)



The Harvard University Library's online Hollis catalog is the University's database for their entire, 15 million strong, collection of books, journals, manuscripts, maps and numerous other documents of varying type. The catalog provides the capability of searching only for electronic resources, which include journal articles, CD-ROMs and, more appropriate for our comparison, full-text books. Once a book is selected the site provides a page-turning interface very similar to the one implemented on all MBooks. Although the University restricts access to most of the online books to only members of the Harvard community, there are a number of resources available to the general public, mostly resources that are out of copyright.

Aesthetics:

In the same way that the University of Michigan colors are used in the color scheme for the MBook interface, so too does Harvard supply their crimson and gray colors for their page-turners. These colors, although patriotic to the University, are a bit jarring and distracting when trying to read an online text. The bright crimson color highlights important links and functionality, however it does draw attention away from the text. The way the splitting of the interface is more reminiscent of a poorly designed framed website than that of a book, detracting from the experience of flipping through a book. The page turner is very similar to that of an MBook, but both lack the feeling of warmth often needed to encourage reading online versus reading a printed version.

## Key Benefits

- Provides downloading to authorized users; very comprehensive in terms of user control of included pages
- Allows users to browse or search just their online resources
- Interactive contents

## Disadvantages

- Layout is unattractive; useful functionality but does not make use of new innovations in site design
- Single page
- Zooms in increments, no percentages

What follows is are two tables that compare the key functionality and usability elements of MBooks and other online reading systems. While MBooks stacks up fairly well against competitors in terms of its application of usability principles, it remains lacking in the functionality that is made available by some other online book providers.

### Functionality Issues

	Google Book Search	Amazon	Safari Books Online	Open Library	Harvard Library	Mbooks
<b>Search Within the Text</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Search/Browse the Collection of E-Resources</b>	Yes	Limited to Advanced Search only	Yes	Yes, only through Internet Archive	Yes	No
<b>Download the Full Text</b>	Limited	Limited to Book Purchase	Limited	Yes	Yes	Limited, essentially no
<b>Provides Abstract or Summary</b>	Yes	Yes	Yes	No	No	No
<b>Browse within Books (table of contents)</b>	Yes	No	Yes	No	Limited	No

### Usability Issues

	Google Book Search	Amazon	Safari Books Online	Open Library	Harvard Library	Mbooks
<b>Recommender Systems</b>	No	Highlights what other users liked; User Reviews	Yes	Can provide a rating and read/write reviews	No	No
<b>Help Options</b>	Explanation of text availability; basic FAQ	Extensive help modeled after Microsoft help menus (indexed with search)	Extensive sectioned FAQ	Very limited; pop-up menu	Very detailed, extensive instructions (in e-book format: search and browse)	Informative FAQ
<b>Time to find desired resource</b>	17 minutes	1 minute	5 minutes	5 minutes	5 minutes	very long, must navigate Mirlyn search and then hunt for Mbook in results

	<b>Google Book Search</b>	<b>Amazon</b>	<b>Safari Books Online</b>	<b>Open Library</b>	<b>Harvard Library</b>	<b>Mbooks</b>
<b>Ease and Usefulness of Downloading</b>	Can't download to harddrive, "save as" button in browser is disabled	very easy to download snippets from texts, but have to purchase for full text	can email or print section by section, easy to copy and paste, can't download in one click	can download pdf (whole book), or have the book printed and bound	simple access to download: can download one page, user defined section, or whole book as pdf	download as image, pdf or full text but only page at a time, and pdf cuts off edge
<b>Orientation with Site: time to learn functionality</b>	Familiarity with basic Google Search Engine makes book search very simple	no learning curve if you are familiar with standard web browsing	Menu stays static and easy to navigate through a browse	like reading a book; but some pop ups have x's and some don't, confusing to try to close	had to familiarize myself with Harvard online culture (collection named Hollis), but search itself was simple	very difficult to discover Mbooks connection with Mirlyn; also want to click Mbooks logo but must choose "click here" button
<b>Accessibility</b>	zoom in or out without percentages (range of 7), can only view as pdf	can zoom but does not support screen readers	zoom in or out without percentages (range of 2), not 508 compliant	magnify link not active; no zoom in book view	only four zoom sizes, ability to ocr to text, no percentages	50 - 400% with 6 increments; can convert to text (OCR) for screen reader
<b>Smoothness of path to service/getting to book</b>	Basic Google search to list of results	find book that has "look inside" button within the search results and then click cover of the book	can get to the website from the library website or Google; search or browse for book	click the cover of the book from Open Library Pate; can search or browse from Internet Archive	Can search only in eresources and click on "internet link"	general collection search for eResources, browse results for books and find Mbook icon to access book; not obvious
<b>Other Unique Attributes</b>	"did you mean" function to correct user vocabulary errors; provides access to other additions; gives purchase information	extensive catalog; ability to purchase in 1 click; can highlight and make notes	advanced search within collection; static menu for book and collection	Original page numbers are represented on images and in .pdf downloads	can convert to pdf and print one page, user defined sections or whole book	Various resize options

## Concluding Remarks

The literature on ebooks and their usefulness in the market has highlighted a list of functions and design features that have been advocated by scholars. They are:

- Searchability across a whole subject category or a specified subset of online books
- Inclusion of online books in a library's Web catalog with hyperlinks to the books themselves
- A stable Web address for each book or article, allowing design of user-friendly access
- Migration and refreshing of electronic books over time so that the books continue to be accessible
- Table of contents with a comprehensive set of chapter subheading and graphics links
- Grouping of images as thumbnails and links of the thumbnail images to their presentation in normal size and location
- Smooth movement among pages of a book
- Footnote text in a block adjacent to the linked text in the book
- Capacity to view multiple pages or pages and images simultaneously
- Pagination consistent with that of the print book
- Hyper-linked references if the referenced book or article is available online
- Links to a dictionary and to other relevant reference materials, such as multilingual dictionaries, atlases, and encyclopedias
- Pages with adjustable fonts, margins, and the like so that each reader can select the look
- Individual capacity for annotations, bookmarks/highlights, and notes for each book; an instructor and the students in a class could share a set of annotations to a text<sup>8</sup>

MBooks meets about a third of these qualifications. The systems that go the farthest toward fitting all of these recommendations are the commercial systems that were evaluated. It is our determination that MBooks should focus on the areas where it falls short and the commercial entities excel. The matrix of issues indicates that our user testing should assess the need for an interactive table of contents to link directly to chapter beginnings, for additional annotation and citation features, for enhancing the options for offline viewing (i.e. downloading), for browsing of the collection, and for improvement of integrated reference features. Other issues related to view and aesthetics should be analyzed as well, as MBooks does a wonderful job meeting accessibility issues throughout the design of the site but still exhibits a very basic feel that doesn't make use of all the Internet can now offer in terms of representing the appearance of physical objects. Offering users more similarity to books by allowing for two-page viewing, a row of thumbnails to provide a reader with context, or even animations to mimic real page turning, can all help to improve the user experience (although this should only be done for a real need, not for novelty).

MBooks has created a terrific opportunity for University of Michigan to develop not just a delivery system for pages of text but rather an online research tool that can improve on the traditional services offered by libraries and their holdings. As stated earlier, it is *adding* to the value of books that will allow online reading systems to find their place in the world of information. This basic illustration of the features being developed by a range of actors on market will provide a useful roadmap for determining how to best serve researchers turning to the University of Michigan

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<sup>8</sup> List paraphrased from Summerfield, pg. 64

and MBooks. While there is some catching up to do, it is clear that MBooks knows the direction they must travel to make these improvements and is currently on the path toward doing so.